EFFECTIVENESS OF STEAM INHALATION WITH TULSI LEAVES VS HOT WATER ON CORYZA AMONG CHILDREN WITH URTI IN SELECTED COMMUNITY AREA AT MANGALORE

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ABSTRACT

Effectiveness of steam inhalation with tulsi leaves vs hot water on coryza among children with URTI in selected community area at mangalore.

Infections of the respiratory tract are perhaps the most common human ailment. They are a source of discomfort and disability result in loss of time for most adults and also the substantial cause of morbidity in young children. Respiratory diseases are very often found especially in school children. It is one of the leading cause of mortality and morbidity in young children. Out of India's total population 440 million are constituted by children and about 27 million are born each year. But approximately 2 million of them do not live up to the age of 5 years. Inhaling steam is one of the major treatments for respiratory complications and is recommended for dealing with common cold, flu, bronchitis, sinusitis, asthma, and allergies. Dry air passages are moistened, and mucus is loosened and eliminated easier by coughing or blowing the nose. The moist air also alleviates difficulty breathing, throat irritation and inflammation.

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Objectives

1. Assess the symptoms of coryza among children of both groups
2. Compare the effectiveness of steam inhalation with Tulsi leaves VS hot water on coryza among children
3. Find out the association between the effectiveness of steam inhalation with Tulsi leaves VS hot water on coryza in children with selected demographic variables.

Methods:

An evaluative approach was used in the study. The study was conducted at Natekkal primary health centre, Mangalore. The subject comprised of 40 children. The total samples divided into 2 groups (group1 steam inhalation with tulsi leaves and group II steam inhalation with hot water). Purposive sampling technique was used to select the subjects.

Results:

The overall findings of the study have shown that steam inhalation with Tulsi leaves is more effective than steam inhalation with hot water. The mean difference of Tulsi leaves steam inhalation (28.8) was higher than mean difference of hot water steam inhalation (23.2) and the t calculated value (4.470) is higher than t table value (1.69) at 0.05 level of significance. The findings of the study support the need for providing information to improve the knowledge regarding the steam inhalation to relive coryza among children.

Conclusion:

Anti-bacterial and anti-inflammatory effects of tulsi have been confirmed since ancient times. For centuries Tulsi was used as best home remedies for common cold in various states of India. Steam inhalation is a simple, non invasive,cost effective method that can be used for reliving coryza without any adverse effect on children.

Key words: Coryza, steam inhalation with tulsi leaves, steam inhalation with hot water, effectiveness and children

Introduction

The common cold is a contagious viral infection of the upper respiratory tract. A large variety of viruses are associated with common cold and thus the body does not seem to develop immunity against them. It commonly infects school-going children and the incidence of cold reduces with age. It is normal for a child to have cold around eight or more times a year, as there are hundreds of different viruses, which young children meet in their life for the first time.

There is no reason to believe that a safe, soothing home-made remedy is less effective than a safe commercial remedy. Home remedies are usually inexpensive and promote self-reliance. Most of the home remedies are harmless.Natural remedies can be a parent's best choice when it comes to treating children ailments and upsets. In fact, herbs can be particularly safe and effective for children because herbs tend to be much gentler than pharmaceutical alternatives.

Steam inhalation is a method of introducing warm, moist air into the lungs via the nose and throat for therapeutic benefit. Steam inhalation has since become a simple and effective home remedy for various health issues. The inhalation of steam significantly benefits the lungs and throat by acting like an effective natural expectorant. This helps to relax muscles, thereby relieving coughing. Inhaling steam is also necessary for preventing excessive drying of the mucous membranes. Steam inhalation is not complicated or expensive. The major problem in steam lies with the fact that no one likes taking it.

Holy Basil has been used for thousands of years as a traditional medicine of India for Ayurvedic treatment. Known to Hindus as Tulsi the plant is also used in religious ceremonies. Holy Basil is used in Ayurvedic medicine for common cold, headache, stomach disorders and as antidote for some poisons. It maintains the health of the throat, chest and lungs. In fact, it helps to protect the entire respiratory tract and respiratory system.

Tulsi has an important role to play in treating the symptoms of respiratory tract diseases. It acts regularly on phlegm hence it works as a good expectorant giving relief from wet cough. It helps to fight aganist allergy by which our respiratory tract gets inflamed and then resolves the causative agent. It promotes optimum respiratory support. It is an excellent remedy for sore throat and fever. .

Materials & Methods

An evaluative two group pre-test post- test quasi experimental design was adopted. For this study 40 children in the age group 6-12 years are purposively selected. The total samples divided into 2 groups (group I steam inhalation with tulsi leaves and group II steam inhalation with hot water). The researcher had selected Natekkal PHC,Mangalore through convenient sampling for the present study. The Natekkal PHC covers 6 villages and its total population is 23,000. The following instruments were used for collecting of data:

Tool 1 –Demographic Proforma.

Tool 2 – Modified CARIFS (Canadian acute respiratory infection and flu scale) to assess the symptoms of coryza

Data Collection Procedure

Formal written permission was obtained from the medical officer of primary health centre Natekkal Mangalore for conducting the main study. The investigator conducted the main study in the month of October for a period of three weeks from 11th Oct to 3 Nov 2013. The investigator had a formal introduction and developed rapport with the subjects. The investigator obtained consent from the subjects prior to the study. The data collection was done in three phases.

Phase I: After informed consent from the samples of parents the investigator performed Pre assessment of coryza among children of two groups with the help of modified CARIF scale.

Phase II: Then the investigator administered steam inhalation with (8-10) tulsi leaves added in 40^{0}c 50^{0}c boiling water for experimental group 1 and hot water steam inhalation for group 2 which was continued for three days, twice daily at home.

Phase III: The investigator had assessed the post test on corzya among children of Experimental group 1 and Experimental group 2 to evaluate the effectiveness of steam inhalation with tulsi leaves VS hot water in relieving corzya.

Results

Table 1: Distribution of children according to demographic variables

n=40

Demographic variables		Frequency	Percentage
Age in years	6	9	22.5
	7	10	25.0
	8	6	15.0
	9	0	0
	10	6	15.0
	11	2	5.0
	12	7	17.5
Gender	Male	23	57.5
	Female	17	42.5
Religion	Christian	3	7.5
	Hindu	9	22.5
	Muslim	28	70
Education of father	No formal education	-	-
	Primary	19	47.5
	Secondary	16	40.0
	Diploma	4	10.0
	Graduation	1	2.5
Education of mother	No formal education	1	2.5
	Primary	26	65.0
	Secondary	12	30.0
	Diploma	1	2.5
	Graduation	-	-
Type of family	Nuclear	14	35.0
	Joint	26	65.0
	<4000	-	-
	4001-8000	7	17.5

Income	8001-10000	28	70.0
	>10001	5	12.5
Previous history of respiratory illness	Yes	21	52.5
	No	19	47.5
Intake of medicines	Yes	0	0
	No	40	100
Temperature	<98.6 ^{0}F	7	17.5
	98.6-99.6^0 F	27	67.5
	99.7-100.6^{0}F	6	15.0

The above table shows that:

- Most of the children were in the age group of 7 years 10 (25%),9 (22.5%)were in the age group of 6 years and 2(5%) were in the age group of 11 years.
- Majority of the children were males 23 (57.5%) followed by 17 (42%) females.
- Most of the children 28 (70%) were Muslim religion and 3 (7.5%) belongs to Christianity.
- Majority 19 (47.5%) of the father's of children has completed primary education and only one (2.5%) had completed graduation.
- Most of the mothers of children 26 (65%) had secondary education; one (2.5%) had completed diploma and one with no formal education.
- Most of the children 26 (65%) are from nuclear family, 14 (35%)of them lives in joint family and none of them belongs to extended family.
- Distribution of the children according income revealed that majority 28 (70%) had Rs 8001-10000 and 5 (12.5%) children's family with a monthly income of more than Rs 10001.
- Around 50% of the children 21 (52.5%) had the previous history of respiratory problem and 19 (47.5%) children did not suffer from past history of respiratory illness.
- All the children 40 (100%)are not taking antibiotics for present illness.
- Most of the children 27 (67.5%) were suffering from mild temperature between 98.6-99.6^{0}F and only 6 (15.0%) had temperature in the range of 99.7-100.6^0.

Table 2 : Comparison of overall score of symptoms of coryza among children **.**

n=40

Score Level	Pre test				Post test			
	Steam inhalation				Steam inhalation			
	With Tulsi Leaves		With hot water		With Tulsi leaves		With hot water	
	N	%	N	%	N	%	N	%
Mild	-	-	-	-	20	100	20	100
Moderate	5	12.5	7	17.5	-	_	_	_
Severe	15	37.5	13	32.5	-	-	-	-

Data in Table (1) depicts that On pre test 5 (12.5%) children had moderate coryza and 15 (37.5%) had severe coryza in tulsi steam inhalation group (experimental group 1) and 7 (17.5%) had moderate coryza and children had severe coryza 13 (32.5%) in hot water steam inhalation (experimental group 2) .On post test all 20 (100%) children had mild symptoms of coryza in both groups.

Table 2: Comparison of effectiveness of steam inhalation between the groups by using independent sample t test.

n=40

GROUP	Mean	S.D	t-value	p-value
Steam inhalation with Tulsi leaves	28.85	3.21	4.470	P<0.001 HS**
Steam inhalation with hot water	23.2	2.33		

The table (2) depicts that the mean difference of Tulsi leaves steam inhalation (28.8) was higher than mean difference of hot water steam inhalation (23.2) and the t calculated value (4.470) is higher than t table value (1.69) at 0.05 level of significance. So Tulsi steam inhalation is more effective for reducing symptoms of coryza in children.

Discussion

- The present study shows that in experimental group 1 (12.5%) five children had moderate coryza and 15(37.5%) had severe coryza and in experimental group II (17.5%) seven children had moderate coryza and 13(32.5%) had severe coryza in pre-test. In post test both the groups 20 (100%) children had only mild symptoms.

The findings of the present study are supported by a descriptive study conducted on symptoms of common cold in school children at USA in 2008. Study results shows that the most common signs of common cold were cough and sneezing, and the most common symptoms were nasal congestion and runny nose. Other symptoms includes feverishness and headache, were each reported in 15% of children.

- On comparison the mean difference of Tulsi steam inhalation (28.85) was higher than mean difference of hot water steam inhalation (23.2) and the t value (4.470) was higher than 't' calculated value (1.69) at 0.05 level of significance. So Tulsi steam inhalation is more effective than hot water steam inhalation for reducing symptoms of coryza in children

The study findings are supported by a similar experimental study conducted on Effectiveness of tulsi in respiratory Infection during August, 2009. Tulsi leaves are boiled in water and the essence is given to children and adults who suffer from flu and common cold, Tulsi is found to improve the body's defense mechanisms against viruses in general and its effectiveness has been vouched for its ability to act against the virus causing Flu and common cold.

Tulsi is found to improve the body's defense mechanisms against viruses in general and its effectiveness has been vouched for its ability to act against the virus causing Flu and common cold.

The researcher felt steam inhalation reduces the nasal congestion and nasal blockage. The medicinal ingredients in Tulsi must have for longer & peaceful life after research it proved &

certified that it is safe to consume Tulsi on coryza. These remedial properties are well accepted by modern science.

- Also the present study revealed that there is no association between the effectiveness of steam inhalation with selected demographic variables.

The study findings are supported by a similar study conducted the effectiveness of home based steam inhalation. The study revealed that there is significant improvement in symptoms clearance in acute upper respiratory tract infection among under five children after steam inhalation therapy. There was no significant association between the symptom score of acute upper respiratory tract infection after home based steam inhalation therapy, with their demographic variables like age, sex, type of family, monthly income of the family and past history of acute upper respiratory tract.

Conclusion

In India the health care delivery system at present emphasizes on preventive and cost effective measures. The findings of this study have shown that Tulsi steam inhalation is effective in reliving from symptoms of coryza than with hot water steam inhalation. Steam inhalation is a non-pharmacologic method to reduce coryza in children. This study helps to practice simple and cost effective home management procedures to reduce the symptoms of acute upper respiratory tract infection at home and in a community area.

Acknowledgement

Our sincere gratitude to **Dr.Sanal.S,** Statistician for his expert guidance and suggestions in the statistical analysis of data. I am grateful to all the **Participants** who formed the core and basis of the study for their wholehearted co-operation

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